

VI. Treating the Traumatized Amputee

Harold J. Wain, Ph.D, COL Stephen J. Cozza, MAJ Geoffrey G. Grammer, Marvin A. Oleshansky, M.D, COL Dermot M. Cotter, MAJ Mark F. Owens, Catherine M. DeBoer, MAJ Erin C. McLaughlin, Corina M. Miller, L.C.S.W., and Rosalie M. Kogan, L.C.S.W.

Although injuries resulting from war produce many turbulent and confused emotions, the needs of those who suffer amputations are unique. Amputation or blindness results in a loss of body function and is an insult to the patient's psychological sense of body integrity and competence. In addition to the loss of body parts, service members often must endure other injuries, as well as psychological traumas. Fear of persistent threats, anxiety related to military career curtailment, and reactions to other past overwhelming experiences may all contribute to the complex turmoil with which they struggle. Any of the above by itself is enough to overwhelm one's psychological equilibrium. Combined with the loss of a limb, eye, or other body part, additional trauma can be exceptionally devastating.

Caring for the amputee patient requires a biopsychosocial approach. The initial clinical focus is rightly on medical stabilization. Follow-on rehabilitation focuses on restoring the individual to the greatest physical, psychological, social and economic functioning possible (Haslam et al., 1960; Mendelson, Burech, Phillips, & Kappel, 1986). A successful team approach to rehabilitation includes the patient, physicians, nurses, therapists, and family members working together to create short and long term goals for the patient's rehabilitation. As the medical injury stabilizes, attention must shift to ensure the psychological well being of the patient and the support of his/her confident reintegration into society.

This chapter focuses on the unique psychological needs of the amputee patient. A brief review of the literature on treatment of amputee patients is provided. As members of the Walter Reed Army Medical Center Psychiatry Consultation Liaison Service (WRAMC PCLS) at the military medical center receiving the majority of amputees from Operation Iraqi Freedom, we provide a description of the amputee population treated and the therapeutic practices that have appeared to be most successfully implemented.

A Brief Review of the Literature Regarding Treatment of Amputees

The literature reports a variety of emotions that occur in the amputee after the initial trauma and throughout the rehabilitation process. Depression, anxiety, resentment, anger, fear, helplessness, hopelessness, as well as loss of body integrity have all been described in this population (Brown, 1990; Caine, 1973; Olson, 2002). Amputees may also develop grief responses (Olson, 2002), relationship difficulties (Mendelson et al., 1986), body image problems (Ronaldson, 2000), or phantom limb pain (Murray & Fox, 2002). Changes in physical appearance may complicate interpersonal relationships (Hanna, 1996) or create discomfort with sexual intimacy (Ronaldson, 2002). Murray and Fox (2002) reported that patients with fewer emotional problems and good social support had better outcomes in adjusting to prostheses. Therefore, treatment of the amputee's psychiatric symptoms may also help restore function.

Brown (1990) highlighted the positive impact of social support during the rehabilitation process. He discussed the benefit of directing psychological interventions toward helping the amputee

regain independence and reinforcing his/her strengths. Staff from surgical, medical, nursing, and psychiatry services as well as physical and occupational therapists play an important role in the psychological rehabilitation of the amputee. Mendelson et al. (1986) described how all staff members may need to be prepared for the sometimes draining job of providing emotional support to amputee patients. He stressed the importance of medical staff recognizing that patients who are highly anxious and fearful prior to surgery are more likely to be angry and resentful toward their surgeon later on. The medical staff may be able to alleviate some of this anxiety by taking the time to listen and validate patient fears (Mendelson et al., 1986).

Gerhards, Florin, and Theodore (1984) emphasized the necessity of establishing a safe place in which patients can discuss their anxieties and concerns. These authors proposed that allowing the patient to discuss personal problems in confidence possibly will facilitate positive rehabilitation outcomes. Therapeutic groups may serve this purpose well. Such amputee groups provide patients with social support as well as a safe environment in which to discuss the details surrounding their amputation and any perceived problems with rehabilitation. Patients are able to gain support from other patients in similar situations. Fisher and Samelson (1971) found that holding group discussions for amputees facilitated patient's acceptance of the amputation. Caine (1973) reported similar findings. The WRAMC PCLS service has published reports regarding the benefit of group therapy with injured military members (to include some amputees) during Operation Desert Storm (Wain & Jacaard, 1996), following the embassy bombing in Nairobi (Wain & Stasinis, 1999), and during the current conflicts in Iraq and Afghanistan (Wain, Grammer, Stasinis et al., 2004).

Depending upon the particular psychiatric symptoms or diagnoses that present as a result of an amputation trauma, a variety of specific treatments may be appropriate. The authors will not review this wide-ranging literature. Of course, the treatments of choice for patients suffering from mood or anxiety disorders (the more likely diagnoses in amputee patients) include pharmacotherapy and psychotherapy. Pharmacological treatment of insomnia is also indicated. Those patients specifically suffering from PTSD may additionally benefit from cognitive behavioral approaches that include some elements of exposure as well as cognitive restructuring.

The WRAMC Amputee Population

Since the onset of Operation Iraqi Freedom more than 75 amputee patients have been treated at WRAMC. This number reflects approximately one-quarter of the total returning battle-injured patients. Within this amputee group, just over half were lower limb amputations (either unilateral or bilateral above or below knee amputations). Sixteen percent were categorized as eye injuries or enucleations that resulted in blindness. The remainder related to arm, hand, finger, or foot amputations. The psychological impact of the amputation varied, depending upon the loss of body part and the resultant functional loss, the disfigurement, the impact on sense of body integrity and the psychological resilience of the individual.

WRAMC PCLS Approach to the Amputee Patient

Members of the WRAMC PCLS team developed a plan of action prior to the arrival of battle casualties. As a well-known and well-integrated clinical service among medical and surgical teams in the hospital, WRAMC PCLS was well situated to play a major role in the medical response to all battle casualties. The plan was informed by a review of the literature and by prior team member

experiences in treating injured patients in previous wars (Wain & Jacaard, 1996), as well as the recent attack on the Pentagon (Wain et al., 2002).

Preventive Medical Psychiatry (PMP). The PCLS team members came to appreciate their need to be immediately and universally available to returning injured patients while team members minimized perceived stigma related to psychiatric consultation. This understanding significantly shaped the response plan. The team determined that these requirements would be best accomplished by redefining WRAMC PCLS as an intrinsic part of the trauma team. All injured service members, including amputees, were always seen. There was no requirement for traditional consultation from the primary treatment team. The medical and surgical teams valued the regular and intensive involvement of WRAMC PCLS. Because patients were told that members of the PCLS service routinely saw all those who were injured, little resistance developed.

In an additional effort to decrease patient stigma PCLS renamed itself (for the purposes of trauma consultation) as the Preventive Medical Psychiatry Service. All chart notes were written under the title of PMP and professional cards were distributed to the patients with the same name. The purpose of this renaming was to communicate to patients that mental health clinicians were available to help them with what were explained as normal, expected responses to the trauma, rather than pathological states. The use of the name PMP appeared to debunk myths among patients about psychiatry as an intrusive and “labeling” specialty, facilitating the mental health clinician being seen more as an ally and an advocate.

Therapeutic Intervention for the Prevention of Psychiatric Stress Disorders (TIPPS). Wain, Grammer, and DeBoer (2004) described their program Therapeutic Intervention for the Prevention of Psychiatric Stress Disorders. The fundamental tenet of TIPPS is its emphasis on normalizing psychological experiences, supporting healthy defenses, and monitoring for the development of psychiatric disorders both while in the hospital as well as upon discharge. While primary prevention was a goal of implementation, TIPPS also focuses on secondary and tertiary prevention models through post-hospitalization identification of at-risk or symptomatic service members and their referral for intervention.

Upon initial introduction to the patient, the clinician psychiatrically screens all patients in a safe and private environment. The interview is conducted in a noninvasive and nonconfrontational manner. The patient verbally recounts the trauma experiences with the ultimate goal of consciously weaving and integrating the experience into a cohesive narrative. The patient is allowed to relate memories, thoughts and feelings about the trauma, at his/her own pace. Early on, the clinician supports the patient's defensive style and normalizes these responses and cognitions. An example of a comment supporting the patient's defensive style might be: “It is amazing that despite how hurt you were and how much pain you were in you still were able to climb out from under the rubble to get help.” An example of a normalizing comment is: “It is hard to imagine that anyone could not feel scared given what you went through.” This process is regularly repeated in individual and group sessions. The patient's effective use of defenses and healthy behavioral reactions are underlined and reinforced as appropriate.

Applying TIPPS principles, the mental health clinician must allow patients to maintain appropriate defenses while offering them sufficient hope if their treatment is to be effective. Attacking defenses, as in breaking through normal denial, will likely cause the patient to view the clinician as caustic and intrusive rather than as helpful. During the initial stages of treatment it is vital to avoid

confrontation and irrelevant insights. Focusing initially on concrete discussions related to the physical injuries, treatments and the healing process appears to be beneficial.

The Therapeutic Alliance and Therapeutic Interactions

The therapeutic alliance with the patient is key to successful treatment response. Anecdotally, clinicians observe that the better the relationship between the PMP clinician and the patient, the more helpful the intervention seems to be. The importance of developing a positive therapeutic relationship may be even greater in medical-surgical patients given their natural tendency to be skeptical of psychiatric involvement. As a good relationship develops, the patient begins to see the clinician more as an advocate who can be helpful. PMP team members have suggested that patients who develop good therapeutic relationships with providers are more likely to seek assistance both during hospitalization and after discharge when problems arise. This undoubtedly would contribute to the success of any secondary or tertiary illness prevention plan.

Following the development of good therapeutic relationships with their assigned clinicians, patients are then asked to recount their trauma in greater detail. They continue to be positively reinforced for their participation, their ability to describe their experiences and for the healthy behavioral choices that were made both during and after the trauma. As the patient is able to tolerate greater interest in and discussion of the traumatic events, he/she is helped to cognitively reframe distortions. Emotional conflicts are acknowledged in a supportive and compassionate manner; with the particular goal of helping build a more reality based appreciation of the traumatic events. All therapeutic involvement encourages the patient's positive acceptance of rehabilitation as well as an appreciation of his/her clinical progress.

As the treatment continues, therapeutic issues may arise in a number of areas. Amputees often have questions about whether and how relationships with friends and family members will change. Anger resulting from a variety of sources is not uncommon and will be expressed in many different forms. Clinicians must be able to tolerate and accept patient anger, recognizing it as a normal expression. Patients must be allowed to find effective and healthy ways of communicating their own frustrations so as to have their needs met, not letting these frustrations interfere with the treatment process.

Later in treatment amputees may become more comfortable in addressing fears about the impact of the amputation on sexual functioning. Such worries are particularly understandable given that most of these amputees are young and many have yet to establish long-term intimate relationships. Of course every amputee faces the task of integrating a new sense of his or her body and its wholeness. The lack of confidence in body image, either due to amputation or disfigurement, is likely to have an impact on the amputee's sense of attractiveness and possibly his/her sense of sexual competence. The ability to address these issues openly and honestly reassures these patients that such concerns can be discussed and that valuable information is available.

Mental health liaison with orthopedics, physical medicine, and occupational therapy becomes increasingly crucial as amputees work through rehabilitation, regain strength, and are fitted for prostheses. Liaison work with prosthetists focuses on helping amputees effectively accept and integrate the prosthesis into their new body image. For those who harbor resentment and anger about amputations, the transition to effective prosthetic use may be more difficult. Members of the PMP team have been impressed with the emotional resilience of many amputees who actively

incorporate prosthetic use. This is a healthy response in which patients put themselves back together, both physically and psychologically. Many such motivated service members have demonstrated incredible physical feats using their prostheses in large part due to their psychological striving for health. Nevertheless, the therapeutic road may not always be smooth. Having regular contact with amputees allows them to share their concerns, both individually and in groups. Patients develop strong attachments to and reliances on their new artificial limbs, sometimes worrying about breaking them. Practically speaking, just having the contact numbers of the prosthetists, should any problems arise, generally decreases their apprehension and separation anxiety when they leave the hospital.

Working with Families

No amputee patient can be effectively treated without understanding and addressing the needs of the patient's family. Loved ones understandably want to spend time with their injured family member and some families remain in hospital rooms throughout the day, evenings, and even nights. WRAMC nurses have recognized the importance of family member involvement and work to incorporate families into the overall treatment plan. Family members who have feelings of anger or frustration related to the injury may direct those emotions toward the treatment team. Under such circumstances it's important to recognize and address such emotions in ways that the feelings do not become destructive to the effective treatment of the patient. WRAMC PCLS team members become actively involved to assist family members and health care providers in addressing any conflicts and finding effective resolutions. All families have a PCLS team member assigned to provide support and address any concerns that might arise during the hospitalization or after discharge.

As the amputee program has evolved it has become clearer that families are not always prepared to meet their loved ones and face the injuries of the amputee when he or she returns stateside. This is particularly true of the children of the injured. In the flurry of activity involved in treating amputee patients, the vulnerability of these smaller and more psychologically fragile family members can be missed. Just as in other upsetting or frightening circumstances, adults should prepare children for what they will witness and observe. Oftentimes, children's fantasies about injuries may be worse than reality. Discussing the nature of the injury, what the hospital room will look like, what medical equipment is present, what bandages, tubes and other paraphernalia will be attached to the patient can all help children understand and integrate the experience in a less traumatic fashion. Many amputee or otherwise disfigured patients recognize their potential impact on their own children and are interested in discussing the best ways to interact with these younger family members, particularly at the first meeting. Mental health clinicians, in conjunction with nurses and other health care providers, should discuss these concerns openly and build practical plans with the amputees to avoid discomfort on the part of either the patient or the small child.

Other Modalities of Treatment

Other clinical treatments are integrated into the therapeutic plan, as appropriate. PCLS team members have found the use of hypnosis to be extremely effective. Clinicians teach patients to use hypnotic-relaxation techniques so that they might be able to control their emotional responses and recede into quiet contemplative states when desired. Patients are taught that such approaches can be used to modulate their emotional reactions to the trauma, moving closer at times and more distant at other times. Such control facilitates eventual integration of the experience and promotes

the overall rehabilitation process. Teaching self hypnotic-relaxation techniques may also help the patient sleep, decrease phantom limb sensations and reframe concerns while they are “working through” the trauma. Amputees can also use imagery as a way of visualizing success in their rehabilitation. Wain (1979) described a formal procedure for helping patients learn to use their individual self-hypnotic capability.

Psychoeducational approaches are extremely valuable in helping patients identify the emotional responses that they are experiencing and to recognize warning signs that indicate the need for more rapid or intensive treatment. While TIPPS works to normalize rather than pathologize emotional responses and symptoms, certain symptoms must be watched for. Patients are instructed to identify and report problems with sleep, to include difficulties with sleep onset, nighttime awakenings and nightmares. Similarly, while initial anxiety and depressive symptoms are common and expected after a traumatic amputation, patients are instructed to watch out for continued or worsening symptoms. They should seek out additional help if these occur.

Pharmacotherapy is a major modality of care in treating trauma patients. WRAMC PCLS clinicians have identified the benefit of low dose quetiapine (25-50 mg) as an excellent sedative hypnotic that both reduces sleep latency and drastically diminished nightmares. When used, no morning sedation was noted. As mentioned previously, standard psychopharmacotherapy is indicated when treating diagnosed illnesses. (Please see Chapter IV.)

Although uncommon, amputees can express suicidal ideation as a result of adjustment problems related to the amputation or actual depressive disorders. Of course, when identified, such symptoms need to be carefully evaluated. Risk of self-injury must be determined and appropriate treatments implemented, when necessary.

Follow up After Hospitalization

Amputees receiving these services largely describe satisfaction with the care they receive. They value and appreciate the interest of their care providers and they develop healthy and lasting therapeutic relationships with WRAMC PCLS team members. While TIPPS was initially designed as a primary prevention endeavor, no data have been collected to date that firmly support the conclusion that these interventions prevent the future development of psychiatric illness. TIPPS impact on secondary and tertiary prevention appears more certain. As part of the TIPPS program follow-up telephonic contact is made at three and six months after the initial assessment. Because therapeutic relationships were solidified during the hospitalization, service members are generally comfortable with post-hospitalization contact and are often grateful for the continued interest on the part of the clinical staff. Injured service members suffering from continued medical or psychiatric problems are identified. They are encouraged to obtain appropriate resources and follow up treatment. Assistance is provided as necessary. The importance of tracking these injured who are at-risk and case managing their care cannot be overemphasized.

Medical Discharge From Military Service

A discussion regarding therapeutic approaches to amputee patients is not complete without some attention given to medical discharge proceedings. While some amputees successfully remain on active duty after rehabilitation, many more undergo medical discharge through the Medical Evaluation Board process. Medically discharged service members obtain medical retirement pay

and receive disability allowances through the Department of Veterans Affairs (VA) system. Questions related to military retirement, monetary compensation and future military benefits are understandably concerning to many of these military patients. Different rules apply depending upon time in grade and upon the component to which the service member is assigned (e.g., active duty, reserve, or National Guard).

Some service members appeal medical board recommendations for military discharge and they request to stay on active duty. For some, patriotism and their military identities drive their motivation to remain in service. They don't want to give up their uniform, positions or benefits for their family. Improvements in prosthetic devices have facilitated this process by allowing many more amputees to continue to function effectively in the military service, albeit not in a combat role. WRAMC PCLS clinicians help amputees develop realistic goals for their futures that may or may not include continuation on active duty status. Those military patients who have questions related to the medical board process, disability or other retirement benefits are referred to other appropriate resources.

Conclusions

Taking care of the amputee patient is a challenging, but rewarding process. The WRAMC PCLS service has effectively incorporated the principles of PMP and TIPPS in successfully supporting and treating service members who have been medically returned from Operation Iraqi Freedom. Amputee patients, similar to other trauma patients, benefit from active engagement by mental health clinicians who assist them in integrating their traumatic experiences and who monitor the development of psychiatric symptoms or disorders. Although the primary preventive effect of these approaches remains unclear the process of post-discharge tracking of patients seems to be an effective secondary and tertiary preventive approach. Such post-discharge follow up identifies those patients who develop more serious symptoms or disorders. They then can be referred for more intensive treatments. Therapeutic considerations unique to the amputee patient include the psychological impact of the trauma on body integrity, apprehension about the impact of the amputation on future functioning and the development of intimate relationships, the effective incorporation and use of the prosthetic device, and concerns about medical discharge, disability and future benefits. The mental health team has a responsibility to support amputees and their families as they address all these issues, as well as any others that might develop.

References

- Brown, L.K. (1990). Traumatic amputation: Mechanisms of injury, treatment, and rehabilitation. *AAOHN Journal*, 38, 483-486.
- Caine, D. (1973). Psychological considerations affecting rehabilitation after amputation. *Medical Journal of Australia*, 2, 818-821.
- Fisher, W.G., & Samelson C.F. (1971). Group psychotherapy for selected patients with lower extremity amputations. *Archives of Physical Medicine*, 52, 79.
- Gerhards, F., Florin, I., & Knapp, T. (1984). The impact of medical, reeducational, and psychological variables on rehabilitation outcome in amputees. *International Journal of Rehabilitation Research*, 7, 379-388.
- Hanna, B. (1996). Sexuality, body image, and self-esteem: The future after trauma. *Journal of Trauma Nursing*, 3, 13-17.

- Haslam, E.T., Risinger, D., Metcalfe, R., & Oswald, R.J. (1960). Rehabilitation of lower extremity amputees. *The Bulletin of the Tulane University Medical Facility*, 20, 23-28
- Mendelson, R.L., Burech, J.G., Polack, E.P., & Kappel, D.A. (1986). The psychological impact of traumatic amputations: A team approach: Physician, therapist, and psychologist. *Occupational Injuries*, 2, 577-583.
- Murray, C.D., & Fox, J. (2002). Body image and prosthesis satisfaction in the lower limb amputee. *Disability and Rehabilitation*, 24, 925-931.
- Olson, J.K. (2002). Let the healing begin. *Contemporary Long Term Care*, 25, 23-24.
- Ronaldson, A. (1999). Coping with body image changes after limb loss. *Nursing New Zealand*, 5(11), 14-16.
- Wain, H.J. (1979). Hypnosis on a consultation-liaison psychiatry service. *Psychosomatics*, 20, 678-689.
- Wain, H.J., & Jacaard, J.T. (1996). Psychiatric intervention with medical and surgical patients of war. In R.J. Ursano & A.R. Norwood, *Emotional aftermath of the Persian Gulf War* (pp. 415-442). Washington, DC: American Psychiatric Press.
- Wain, H.J., Grammer, G., Stasinis, J., & Miller, C.M. (2002) Meeting the patients where they are: Consultation-liaison response to trauma victims of the Pentagon attack. *Military Medicine*, 167, 19-21.
- Wain, H.J., Grammer, G., Stasinis, J., & DeBoer, C. (2004). Psychiatric intervention for medical surgical patients following traumatic injuries. Manuscript submitted for publication.
- Wain, H.J., Grammer, G., & DeBoer, C. (2004). *Therapeutic intervention and prevention of psychiatric stress disorders with medical surgical patients following traumatic injuries*. Manuscript submitted for publication.